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08/10/2001 - Salamander Research Nets EIU Graduate Student 10,000 Scholarship

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For Immediate Release:

SALAMANDER RESEARCH NETS EIU GRADUATE STUDENT $10,000 SCHOLARSHIP

CHARLESTON – The mental image of her granddaughter driving thousands of miles with pieces of salamander tails in the back seat of her car -- appropriately stored in dry ice, of course -- gave Erin Casey's grandmother cause to chuckle.

The laughing stopped, however, after Casey announced that her efforts had resulted in a scholarship award of $10,000, courtesy of the Budweiser Conservation Scholarship Program.

Casey, a graduate student enrolled in Eastern Illinois University's Department of Biological Sciences, earlier this year became one of only 10 individuals to receive scholarships through the new program, created to support and promote innovative research or study that responds to today's most pressing conservation issues.

Anheuser-Busch created the program, in partnership with the National Fish and Wildlife Foundation. Scholarship funds are awarded to cover students' expenses for tuition, fees, books, room and board and other direct expenses related to their studies.

The year's winners included five Ph.D. candidates, four master's students and one undergraduate representing universities and schools from across the country.

For 22-year-old Casey, who hails from Fairfax, Va., the $10,000 represents the freedom to take a semester off as a teaching assistant and concentrate on research. She is currently seeking her master's degree in biological sciences, with plans to graduate from Eastern in May 2002.

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According to Kipp Kruse, chair of the university's Department of Biological Sciences, Casey and her faculty mentor, Mark Mort, were told that their grant, titled "Genetic Diversity and Conservation of the Seal Salamander," was ranked as the top grant of all that were submitted in the competition."

More than 200 applications were received representing more than 90 different colleges and universities in 41 states.

Casey explained the nature of her research: The Seal Salamander (*Desmognathus monticola*) can be found throughout the Appalachian Mountains – all the way from Pennsylvania to northern Alabama. In addition, though, there is a separate, state-endangered population, located in the coastal plain region of Alabama.

This separate population may represent a newly derived population or, in contrast, may be a relictual, or remnant, population of Seal Salamander, descendants of those pushed to the isolated location by historic glaciers in the Appalachian region.

In an attempt to determine whether or not there is a direct genetic relationship between the main salamander population and the isolated one, Casey has spent the past several months visiting streams and wet rock edges throughout the Appalachian Mountains. Her goal has been to seek out individual Seal Salamanders (a.k.a. by the locals as spring lizards and/or fish bait), catch them, extract tissue samples from their tails, then release the small amphibians (approximately six inches in length at maturity) back into the wild.

Casey said the procedure does no permanent damage to the creatures in that they habitually shed their old tails in order to allow new ones to grow.

After obtaining the tail samples, Casey placed them in dry ice where they stayed until they could be shipped back to Eastern to be stored. And periodically over the summer months, she returned to Eastern in order to process her carefully collected specimens -- in short, to collect DNA samples from each of them.

Her field work completed, Casey expects to complete her research during the Fall 2001 semester, leaving her the Spring 2002 semester in which to write her thesis on the project.

Casey hopes her efforts and the data collected will provide an answer to the question of

origin of the isolated Seal Salamander population and determine, once-and-for-all, the relationship, if any, between them and their more populous counterparts.

And, perhaps most importantly, she hopes the information she collects will help shed light on potential strategies for management and conservation of the isolated population.

(For more on the Seal Salamander, see http://www.wsu.edu/~mlmabry/monticola.html.)